

REMARKS

Reconsideration and withdrawal of the rejections of the application are requested in view of the amendments and remarks presented herein, which place the application into condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

Claims 1-17 and 39-41 are currently under consideration. Claims 14 and 17 are amended without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

Support for the amendment to claim 14 can be found, for example on page 2, lines 17-21, and on page 7, lines 19-23. The amendment to claim 17 clarifies the paper from which the fibre is manufactured. No new matter is added.

It is submitted that the claims are patentably distinct over the prior art and that these claim are and were in full compliance with the requirements of 35 U.S.C. § 112. The amendments of the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112; but simply for clarification and to round out the scope of protection to which Applicant is entitled.

II. THE REJECTION UNDER 35 U.S.C. § 102 IS OVERCOME

Initially, Applicant submits that establishing a *prima facie* case of obviousness requires that the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143. Further, in order to ground an obviousness rejection, there must be some teaching which would have provided the necessary incentive or motivation for modifying the reference's teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowicz*, 27 U.S.P.Q. 2d 1063 (BOPAI 1993). As stated by the Court in *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1783-1784 (Fed. Cir. 1992): "The mere fact that the prior art may be modified in the manner suggested by the Office Action does not make the modification obvious unless the prior art suggests the desirability of the modification." Also, the Examiner is respectfully reminded that for the Section 103 rejection to be proper, both the suggestion of the claimed invention and the expectation of success must be founded in the prior art, and not Applicants' disclosure. *In re Dow*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). Furthermore, the Supreme

Court has recently reaffirmed the factors set out in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18: “[T]he scope and content of the prior art are determined; differences between the prior art and the claims at issue are...ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *KSR International Co. v. Teleflex Inc.*, 550 U.S. ____ (2007).

Section 103 over Boehm

Claims 1, 2, 4, 7, 13, 15, 16, 39, and 41 were rejected under Section 103(a) as allegedly being unpatentable over Boehm (U.S. Patent No. 4,897,300). This rejection is traversed.

Applicants assert that Boehm does not render the claimed invention as unpatentable, as Boehm does not teach or suggest every element of the instant claims. Instant claim 1 recites “[a] **fibre** having a plurality of regions printed on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light,” (emphasis added) while instant claim 39 recites “[a] **fibre** having a plurality of regions having print on front and rear sides of said fibre, wherein said regions are coloured and the fibres are visible only under ultra-violet light” (emphasis added). Moreover, instant claim 41 recites “[a] **fibre** having a plurality of regions on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light” (emphasis added).

In contrast, Boehm relates to security **thread** that is printed with luminescent colors. Security thread differs from security fibre, and one skilled in the art would not be motivated to transfer techniques known to thread technology to fibres in light of these differences. For example, security thread comprises a width of about 1 mm, which offers a particularly effective optical effect when incorporated into a paper product. See specification, p. 6, ll. 11-17. In contrast, it is known in the art that threads are typically on the order of a few centimeters wide.

In addition, the differences between security fibres and security threads is illustrated in how they are applied in paper products. For instance, security fibres are mixed in slurry paper pulp from which the paper products are formed. As a result, the security fibres are typically randomly distributed within the paper product. See specification, p. 13, ll. 1-10. In contrast, the

security thread in paper products runs from edge to edge across the paper product. Boehm, col. 1, ll. 4-7.

Furthermore, it is known in the art that security fibres are less complex than security threads and may comprise less expensive material, while security threads may be more complex and expensive since fewer threads are required in each paper product.

Given the considerable differences between security fibres and security threads, and the silence in Boehm as to security fibres or how to apply features associated with security threads to security fibres, it would not have been obvious to consider the security threads in Boehm and arrive at the claimed invention of claims 1, 39, and 40. Hence, Boehm does not render independent claims 1, 39, or 40 as unpatentable, nor render claims 2, 4, 7, 13, 15, or 16 as unpatentable by virtue of their dependency on claim 1.

Section 103 over Boehm in view of Kaule *et al.*

Claims 2-7, 14, and 40 were rejected under Section 103(a) as allegedly being unpatentable over Boehm in view of Kaule *et al.* (U.S. Patent No. 4,756,557). This rejection is traversed.

Claims 2-7 relate to the fibre of the claimed invention, wherein the regions of the fibre are striped regions and said striped regions include two or more differently coloured striped regions. Claim 14 relates to the fibre of the claimed invention wherein the region of the fibre abuts one another with no overlap of colour at the boundaries of any of the regions. Claim 40 recites “[a] fibre having a plurality of regions having printing visible on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light.” Applicants assert that the combination of Boehm and Kaule *et al.* does not render these claims as obvious.

Applicants reiterate that Boehm does not teach or suggest security fibres or how to transfer and apply techniques associated with security threads and apply them to security fibres. Importantly, Kaule *et al.* does not remedy this deficiency in Boehm, as Kaule *et al.* relates to security “**thread** [having] . . . at least three **stripes** extending lengthwise on the thread and arranged exactly parallel to each other, which differ in terms of their physical behavior, for example their color, their fluorescent or their magnetic properties” (emphasis added). Kaule *et al.*, col. 2, ll. 35-39. Kaule *et al.* does not teach or suggest how these features used in security threads can be applied to security fibres.

In addition, Applicant argues that there would be no motivation to arrive at the claimed invention of claim 14. Boehm emphasizes that the use of overlapping colours is advantageous, because the “compound colors which occur in the overlapping areas due to the mixed luminescence present there are extremely difficult to reconstruct, since basic colors with only slightly different emission spectra cause a great shift in the mixed fluorescence.” Boehm, col. 2, ll. 11-16. This provides the thread with a high protection value and makes forgery very difficult. Hence, Boehm teaches away from having regions with no overlap of colour at the boundaries, as claimed in claim 14.

Thus, Boehm, or the combination of Boehm and Kaule *et al.* does not render claim 14 as obvious. Further, in consideration of the arguments herein, the combination of Boehm and Kaule *et al.* also does not render claims 2-7 and 40 as obvious.

Section 103 over Boehm in view of Tillotson

Claims 8-12 were rejected under Section 103(a) as allegedly being unpatentable over Boehm in view of Tillotson (U.S. Patent No. 3,898,035). This rejection is traversed.

Claim 8-12 relate to the fibre of the claimed invention wherein the regions of the fibre are arranged in a pseudo-random pattern.

As described above, Boehm does not teach or suggest security fibres or how to transfer and apply techniques associated with security threads and apply them to security fibres. Tillotson does not remedy this deficiency in Boehm, as Tillotson relates to an “apparatus for producing a more regular control of the color of dyed **yarns**, as well as the lateral and longitudinal distribution of colored portion of the **yarn . . .**” (emphasis added). Tillotson, col. 1, ll. 59-61. Therefore, neither cited reference teaches or suggests security fibres or how to apply the technologies associated with security threads to security fibres.

Moreover, there is no teaching or suggestion in either cited reference that the method of distributing colors used in Tillotson can be applied to the security threads of Boehm. For example, the apparatus in Tillotson involves the use of a pulling force of 2 to 10 pounds on the yarn ends. See Tillotson, col. 8, ll. 39-41. Such a force is clearly not intended for use with materials having dimensions of security threads or security fibres, but rather is used with yarn that is much thicker and is thereby not used in security applications. With this in mind, the skilled artisan would not expect to successfully arrive at the claimed invention of claims 8-12 by

combining Boehm and Tillotson. Therefore, the combination of Boehm and Tillotson does not render claims 8-12 as obvious.

Section 103 over Boehm in view of Whitehead

Claim 17 was rejected under Section 103(a) as allegedly being unpatentable over Boehm in view of Whitehead (U.S. Patent No. 2,208,653). This rejection is traversed.

Instant claim 17 relates to the fibre of the claimed invention wherein the fibre is manufactured from paper. In contrast, Boehm relates to security thread, wherein the thread is a strip of a tear-proof synthetic material such as a polyester film. See Boehm, col. 5, ll. 5-9. It is known in the art that paper is neither tear-proof nor synthetic. Thus, the skilled person would not apply the techniques associated with the tear-proof synthetic thread to the paper fibres of the claimed invention.

Whitehead relates to incorporation of a fibre into paper, wherein the fibre contains or is made of an organic ester of cellulose that has been treated with a tertiary amine. Whitehead, p. 1, col. 2, ll. 11-17. The fibre may be produced by spinning. Whitehead, p. 2, col. 1, l. 65 - col. 2, l. 2. One skilled in the art would not consider the spun fibres of Whitehead to be paper fibres as recited in the claimed invention. Therefore, the combination of Boehm and Whitehead fails to teach or suggest the paper fibres of the claimed invention.

Furthermore, Boehm and Whitehead relate to different approaches for providing colour. Boehm relates to printing while Whitehead relates to the use of organic ester of cellulose that has been treated with a tertiary amine. The skilled person would not combine these cited references and print on fibres that are already coloured by the Whitehead technique. Moreover, the fibres of Whitehead may be produced by spinning, and it is not clear how coloured regions could be printed on such fibres. It is also unclear how spun fibres would have front and rear sides as required by claim 1, from which claim 17 depends.

Therefore, the combination of Boehm and Whitehead fails to render claim 17 as obvious.

For at least the reasons provided herewith, none of the cited references render the instant claims as unpatentable. Accordingly, reconsideration and withdrawal of all Section 103 rejections are requested.

CONCLUSION

Applicants believe that the application is in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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